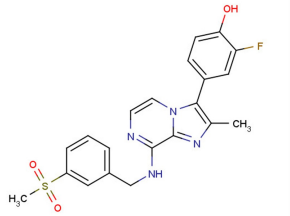
Data Sheet (Cat.No.T16530)

TargetMol
A DRUG SCREENING EXPERT

BF738735

Chemical Properties



CAS No.:	1436383-95-7
Formula:	C21H19FN4O3S
Molecular Weight:	426.46
Appearance:	N/A
Storage:	0-4℃ for short term (days to weeks), or -20℃ for long term (months).

Biological Description

Description	BF738735 is an inhibitor of phosphatidylinositol 4-kinase III beta (IC50: 5.7 nM).
Targets(IC_{50})	PI4KIIIβ: 5.7 nM PI4KIIIα: 1.7 μM
In vitro	BF738735 effectively inhibits all viruses tested, with EC50s ranging between 4 and 71 nM. The cytotoxicity of BF738735, determined in parallel with the EC50 and using the same culture conditions for 3 to 4 days, is low, with CC50 values ranging from 11 to 65 μM, resulting in high selectivity indices. BF738735 exhibits a broad spectrum of antiviral activity, as it inhibits all tested species of enteroviruses and rhinoviruses, with 50% effective concentrations ranging between 4 and 71 nM. BF738735 also impairs PI4KIIIα, but only at an ~300-fold-higher concentration (IC50 of 1.7 μM). The activity of BF738735 is analyzed on a set of 150 cellular kinases, including 13 lipid kinases at a concentration of 10 μM. For all kinases, the inhibition is less than 10%, indicating that BF738735 specifically inhibits PI4KIIIβ in vitro. Low concentrations of BF738735 decrease the amount of luciferase to GuaHCl-treated levels, suggesting that the BF738735 blocks viral RNA replication. The EC50 of BF738735 in this assay is 77 nM, which is comparable to the inhibition observed in the multicycle assay for coxsackievirus serotype B3 (CVB3)[1].
In vivo	BF738735 is well tolerated by specimens with good plasma levels of the antiviral in circulation. A complete inhibition with 25 mg/kg and some inhibition with 5 mg/kg dose is observed[2].

Solubility Information

Solubility	DMSO: 125 mg/mL (293.11 mM) (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.345 mL	11.724 mL	23.449 mL
5 mM	0.469 mL	2.345 mL	4.69 mL
10 mM	0.234 mL	1.172 mL	2.345 mL
50 mM	0.047 mL	0.234 mL	0.469 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 ℃ for 6 months; - 20 ℃ for 1 month. Please use it as soon as possible.

Reference

1. van der Schaar HM, et al. A novel, broad-spectrum inhibitor of enterovirus replication that targets host cell factor phosphatidylinositol 4-kinase IIIβ. Antimicrob Agents Chemother. 2013 Oct;57(10):4971-81.
2. V Saarnio. Antiviral Molecules of Enteroviruses. 13.1.2017.

Tel:781-999-4286 E-mail:info@targetmol.com Address:36 Washington Street,Wellesley Hills,MA 02481